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# Democratizing Access to Knowledge: Find Out What Open Educational Resources (OER) Have to Offer

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# Democratizing Access to Knowledge: Find Out What Open Educational Resources (OER) Have to Offer

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A Presentation for the Teaching Support Centre and Western Libraries  
as part of [Open Education Week](http://openeducationweek.org)



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# Overview

- Presentation Overview:
  - A – Open Educational Resources (OER) and their significance
  - B – Using OER
  - C – Copyright and Licensing Issues
  - D – Creating OER
- Goals for this Presentation:
  - Describe and contextualize Open Education Resources and their importance
  - Provide examples of how to use and locate OER
  - Clarify copyright and licensing issues
  - Provide an introduction as to how to create OER

# A-I. The Openness Trend

- Over the past 10-15 years numerous 'open' movements have emerged:
  - Open source software
  - Open access scholarly publishing
  - Open data
  - Open education
  - Open educational resources
  - Open innovation
- Open initiatives generally aim at eliminating barriers and improving access
- However, there is a lack of consistency on what open implies

# A-II. What Is Open Education

- Open Education (OE) and Open Educational Resources (OER) are distinct, but OER can be used to facilitate OE
- OE is a movement by some educational institutions to eliminate barriers to admission including:
  - Cost / financial limitations
  - Distance / geography
  - Academic requirements
- For example at [Athabasca University](#), the only eligibility requirement is that one is at least 16 years old
- OE is a much broader project and raises questions of accreditation and student support

# A-III. What Are Open Educational Resources (OER)

- Term “Open Educational Resources” coined at a [2002 UNESCO conference](#)
  - OER defined as, “the open provision of educational resources, enabled by information and communications technologies, for consultation, use and adaption by a community of users for non-commercial purposes”
- The 2002 conference was held in response to the [Massachusetts Institute of Technology’s Open CourseWare \(MIT OCW\)](#) initiative launched in 2001
- Alternatively the OECD in [\*Giving Knowledge for Free\*](#) (2007) defined OER as, “digitised materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning and research”

# A-III(ii). What Are Open Educational Resources (OER)

- OER and Open CourseWare (OCW) are often used interchangeably, though some OER may not necessarily be courseware
- OER are primarily university level materials, but there are primary and secondary OER available
- Three types of OER according to the OECD
  - Content – courseware and other learning objects
  - Tools – for creating and delivering resources
  - Implementation Resources – such as licensing systems
- Content is extremely diverse from lecture slides and examination/test material to streaming video, podcasts or any other material designed for teaching and learning

# A-IV. OER Incentives and Barriers

- Institutional incentives/motives
  - Altruistic motive and academic tradition of the free exchange of knowledge
  - Allows for greater visibility and can be used for recruitment
  - Provides access to taxpayers for material they have funded
  - Encourages more collaboration and innovation in development of learning resources
- Institutional barriers
  - Costs of developing and sustaining OER initiatives
  - Fear that OER may undermine commercialization efforts



# A-IV(ii). OER Incentives and Barriers

- Individual incentives/motives for creating OER
  - Altruistic motive and academic tradition of the free exchange of knowledge
  - Enhance one's scholarly reputation
  - The ease of sharing resources and potential benefit to others outweigh motives for not sharing
- Individual barriers for creating OER
  - Lack of institutional support including recognition of OER development in promotion and tenure considerations
  - Fear of loss of control over one's intellectual work
  - Fear of criticism from peers or the broader community
  - Confusion over copyright and licensing issues

# A-IV(iii). OER Incentives and Barriers

- Individual incentives/motives for using OER
  - Costless, easily available, time-saving high quality material
  - Allows for the incorporation of outside perspectives in teaching
  - Interest in pedagogical innovation
  - Promotes education and teaching as collaborative and open activities
- Individual barrier for using OER
  - Concerns of the quality of the content
  - Lack of time and difficulty in locating content
  - Confusion over copyright and licensing issues

# A-V. The Tension between the Public Good and Commercialization

- There are two important social arguments in favour of OER
  - They promote and facilitate lifelong learning
  - They expand access to educational materials to non-traditional students both nationally and internationally
- However, giving knowledge away for free conflicts with the increasing emphasis on commercializing university research (for example, see the Government of Canada's 2007 [Science and Technology Strategy](#), and Western's own [website on commercialization](#))
- Furthermore, depending on the nature of the information in question, individual researchers may end up losing their own ability to commercialize their work by creating OER
- Given the tension between the social goals of OER and the economic goals of increased commercialization, how should scholars choose between conflicting priorities

# B-I. Using OER

- Before using OER there are several important questions to consider:
  - Where to locate OER?
  - How to assess the authority and credibility of each OER?
  - How to determine if a specific OER allows modification?
- Fortunately, concerns over quality, authority and licensing terms can be addressed by carefully choosing where to find OER

# B-II. Locating OER

- General OER Repositories, Directions and Search Engines:
  - Open CourseWare Consortium: <http://www.ocwconsortium.org/>
  - OER Commons: <http://www.oercommons.org/>
  - National Repository of Online Courses (NROC): <http://www.courserepository.org/>
  - World Lecture Hall: <http://wlh.webhost.utexas.edu/>
  - Google OCW/OER Search: <http://www.google.com/cse/home?cx=000793406067725335231%3Afm2ncznoswy>
  - iTunes U: <http://www.apple.com/education/itunes-u/>
- National OER Sites:
  - China Open Resources for Education (CORE): <http://www.core.org.cn/en/>
  - ParisTech Libres Savoirs (France): <http://graduateschool.paristech.fr/?langue=EN>
  - IREL-Open Project (Ireland): <http://www.irel-open.ie/>
  - Japan Open CourseWare Consortium: <http://www.jocw.jp/>

# B-II(ii). Locating OER

- Institutional Sites:
  - MIT OpenCourseWare: <http://ocw.mit.edu/index.htm>
  - Carnegie Mellon Open Learning Initiative: <http://oli.web.cmu.edu/openlearning/>
  - Open Michigan (University of Michigan): <http://open.umich.edu/>
  - Connexions (Rice University): <http://cnx.org/>
  - Tufts University Open CourseWare: <http://ocw.tufts.edu/>
- Multimedia Repositories:
  - Multimedia Educational Resources for Learning and Online Teaching (MERLOT): <http://www.merlot.org/merlot/index.htm>
  - Europeana: <http://www.europeana.eu/portal/>
  - Free Sound Project: <http://www.freesound.org/>
- Discipline/Subject Specific Repositories:
  - OYEZ Project (audio archive of U.S. Supreme Court material): <http://www.oyez.org/>
  - John Hopkins Bloomberg School of Public Health Open CourseWare: <http://ocw.jhsph.edu/>

# B-III. OER Example 1 – OER Commons

- OER Commons has over 30,000 OER though some resources are for grades K-12
- Materials are covered by four different types of licenses (“No Stings Attached”, “Remix and Share”, “Share Only”, and “Read the Fine Print”)
- Easy to use menus to narrow search results and navigable collections

The screenshot displays the OER Commons website. At the top, the logo for OER Commons (Open Educational Resources) is visible. Navigation links include "Register Now!", "Log In", "Feedback", "Help", and "Contribute Content". A search bar with "Enter Search" and a microphone icon is present, along with "Search" and "Advanced Search" buttons. Below the search bar, there are tabs for "Browse All", "OER Landscape", and "My Items".

On the left side, there is a section titled "Find Free-to-Use Teaching and Learning Content from Around the World" with social media share buttons (Facebook Like, Google+, Twitter) and counts (808, 103). Below this is a "Sponsorship" section mentioning "OER Commons is a project of ISKME" with the ISKME logo.

The main content area features a large banner for "OPEN EDUCATION WEEK" with the dates "march 5 - 10, 2012" and the hashtag "#openeducationnext". To the right of the banner, a list of bullet points highlights key features: "Free to Use", "Openly Licensed", "32330 Resources", and "From K-12 to College Courses". A "Browse Now" button is located below this list.

Below the banner, there are sections for "Recommended Resources" and "New Bookmark Button". The "Recommended Resources" section lists several categories: "General Ed and Pre-College Courses", "Common Core Aligned Resources", "Open Textbooks", "Career and Technical Education", "Classroom Management", "Science as Inquiry", and "Art as Inquiry". The "New Bookmark Button" section includes a button to "Add OER" and instructions on how to use the button.

At the bottom right, there is a "OER Commons Tweets" section showing a tweet about "Happy Open Education Week! Join us Thurs Mar 8th / 1pmPST and learn about #OER for your classroom! #edcat #OEWC Webinar" with a link to a webinar and the date "Mar 5, 2012".

# B-III(ii). OER Example 1 – OER Commons



Register Now! | Log In | Feedback | Help | [Contribute Content](#)

[Browse All](#) | [OER Landscape](#) | [My Items](#) |  [Search](#) [Advanced Search](#)

[Home](#) → [Search Results](#)

Search Results: multiple regression

Displaying 1 - 9 of 9 results | 20 results per page | Sort by: [Relevance](#) [Save this search](#)

You searched for:

[Search Within These Results](#)

Refine Your Search

☒ **Subject Area**  
☒ Arts (0)  
☒ Business (1)  
☒ Humanities (0)  
☒ Mathematics &  
☒ Science &  
☒ Social Sciences (3)

☒ **Grade Level** ⓘ  
☒ Primary (0)  
☒ Secondary (0)  
☒ Post-secondary (9)

☒ **Material Type**

☒ **Media Format**

☒ **Conditions of Use** ⓘ

[Expand All](#) | [Collapse All](#)

▶ **Star Library: Regression on the Rebound**   
(Complete Item Description)

Subject: Mathematics and Statistics  
Grade Level: Post-secondary  
Collection: [Causeweb.org](#)

★★★★★

[Remix and Share](#)

[Actions](#)

▶ **Elementary Statistics: Quiz 12: Linear Regression and Correlation**   
(Complete Item Description)

Subject: Mathematics and Statistics  
Grade Level: Post-secondary  
Collection: [Connexions](#)

★★★★★

[No Strings Attached](#)

[Actions](#)

▶ **Applied Statistics, Spring 2003**   
(Complete Item Description)

Subject: Business, Mathematics and Statistics  
Grade Level: Post-secondary  
Collection: [MIT OpenCourseWare](#)

★★★★★

[Remix and Share](#)

[Actions](#)

▶ **Statistical Reasoning II**   
(Complete Item Description)

Subject: Mathematics and Statistics, Science and Technology, Social

★★★★★

[Remix and Share](#)

[Actions](#)

Top Keywords

Analysis of Variance Anova  
Bayes Theorem Bayesian  
Analysis and Risk-Based  
Decision Behavior Genetics  
Best Fit Binomial Distribution  
Biostatistics Categorical Data  
Conditional Distributions  
Decision Analysis Estimation  
of Distribution Parameters  
Fundamentals of Probability  
Hypothesis Testing  
Linear Regression Multiple  
Regression Poisson and  
Markov Processes  
Probability Random  
Processes Random Variables  
and Vectors Second-Moment  
Analysis Simple and Multiple  
Linear Regressions  
**Statistics** System  
Reliability Uncertainty  
Propagation

[See more](#)

[Conditions of Use](#)

Simple  
menus to  
narrow  
search/  
browsing

Content Tile, Grade Level  
and Source

License  
Terms



# B-III(iii). OER Example 1 – OER Commons

Limit results  
by Material  
Type,  
Format, and  
License  
Terms

You searched for:

multiple regression

Search Within These Results

Refine Your Search

☒ Subject Area

☒ Grade Level

☒ Material Type

- ☒ Activities & Labs (1)
- ☒ Assessments (5)
- ☒ Audio Lectures (0)
- ☒ Curriculum Standar...
- ☒ Discussion Forums
- ☒ Full Course (7)
- ☒ Games (0)
- ☒ Homework &
- ☒ Lecture Notes (7)
- ☒ Lesson Plans (0)
- ☒ Readings (1)
- ☒ Simulations (0)
- ☒ Syllabi (7)
- ☒ Teaching & Learnin...
- ☒ Textbooks (1)
- ☒ Training Materials (0)
- ☒ Video Lectures (0)
- ☒ Other (1)

☒ Media Format

- ☒ Audio (0)
- ☒ Graphics/Photos (3)
- ☒ Mobile (0)
- ☒ Other (0)
- ☒ Text/HTML (9)
- ☒ Downloadable docs
- ☒ Video (1)
- ☒ Interactive (0)

☒ Conditions of Use

- ☒ No Strings Attached
- ☒ Remix & Share (7)
- ☒ Share Only (0)
- ☒ Read the Fine Print

Expand All Collapse All

▶ **Star Library: Regression on the Rebound**  
(Complete Item Description)

Subject: Mathematics and Statistics  
Grade Level: Post-secondary  
Collection: [Causeweb.org](#)

☆☆☆☆☆

Remix and Share

Actions

▶ **Elementary Statistics: Quiz 12: Linear Regression and Correlation**  
(Complete Item Description)

Subject: Mathematics and Statistics  
Grade Level: Post-secondary  
Collection: [Connexions](#)

☆☆☆☆☆

No Strings Attached

Actions

▶ **Applied Statistics, Spring 2003**  
(Complete Item Description)

Subject: Business, Mathematics and Statistics  
Grade Level: Post-secondary  
Collection: [MIT OpenCourseWare](#)

☆☆☆☆☆

Remix and Share

Actions

▶ **Statistical Reasoning II**  
(Complete Item Description)

Subject: Mathematics and Statistics, Science and Technology, Social Sciences  
Grade Level: Post-secondary  
Collection: [JHSPH OpenCourseWare](#)

☆☆☆☆☆

Remix and Share

Actions

▶ **Econometrics**  
(Complete Item Description)

Subject: Social Sciences  
Grade Level: Post-secondary  
Collection: [Saylor Foundation](#)

☆☆☆☆☆

Read the Fine Print

Actions

▶ **Probability and Statistics in Engineering, Spring 2005**  
(Complete Item Description)

Subject: Science and Technology  
Grade Level: Post-secondary  
Collection: [MIT OpenCourseWare](#)

☆☆☆☆☆

Remix and Share

Actions

▶ **Structural Models**  
(Complete Item Description)

☆☆☆☆☆

Remix and Share

Top Keywords

Analysis of Variance Anova  
Bayes Theorem Bayesian  
Analysis and Risk-Based  
Decision Behavior Genetics  
Best Fit Binomial Distribution  
Biostatistics Categorical Data  
Conditional Distributions  
Decision Analysis Estimation  
of Distribution Parameters  
Fundamentals of Probability  
Hypothesis Testing  
Linear Regression Multiple  
Regression Poisson and  
Markov Processes  
Probability Random  
Processes Random Variables  
and Vectors Second-Moment  
Analysis Simple and Multiple  
Linear Regressions

**Statistics** System

Reliability Uncertainty  
Propagation

See more

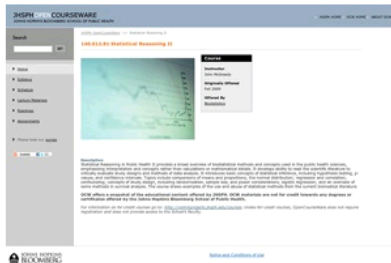
Conditions of Use

No Strings Attached  
Remix and Share  
Share Only  
Read the Fine Print

# B-III(iv). OER Example 1 – OER Commons

[Register Now!](#)[Log In](#)[Feedback](#)[Help](#)[Contribute Content](#)[Browse All](#)[OER Landscape](#)[My Items](#)[Search](#)[Advanced Search](#)[Home](#) → [Course Related Materials](#) → [Statistical Reasoning II](#)[« Previous Item](#) | [Return to Search Results...](#) | [Next Item »](#)

## Statistical Reasoning II

**Author:** McGready, John**Subject:** Mathematics and Statistics, Science and Technology, Social Sciences**Institution Name:** Johns Hopkins Bloomberg School of Public Health**Collection:** JHSPH OpenCourseWare**Grade Level:** Post-secondary

**Abstract:** Statistical Reasoning in Public Health II provides an introduction to selected important topics in biostatistical concepts and reasoning through lectures, exercises, and bulletin board discussions. The course builds on the material in Statistical Reasoning in Public Health I, extending the statistical procedures discussed in that course to the multivariate realm, via multiple regression methods. New topics, such as methods for clinical diagnostic testing, and univariate, bivariate, and multivariate techniques for survival analysis will also be covered. These topics will be reinforced with many "real-life" examples drawn from recent biomedical literature. While there are some formulae and computational

elements to the course, the emphasis is again on interpretation and concepts.

**Languages:** English**Material Type:** Full Course, Lecture Notes, Syllabi**Media Format:** Graphics/Photos, Text/HTML, Downloadable docs**Technical Requirements:** Adobe Acrobat**Conditions of Use:** [Creative Commons Attribution-Noncommercial-Share Alike 2.5](#)[Go to OER Item](#)[+ Add to My Items](#)

### Rate and Review

[Evaluate Resource](#) [What is this?](#)

### Common Core Standards

[Log in](#) to align this item.

### Share



### Tags

Keywords, descriptive words, interested groups & more

[Bivariate](#) [Diagnostic Testing](#)[Multiple Regression Methods](#)[Multivariate](#) [Public Health](#) [Reasoning](#)[Statistics](#) [Survival Analysis](#)[Univariate](#)

# B-IV. OER Example 2 – MIT OCW

- MIT OCW site was instrumental in launching the OER movement
- Site is particularly well suited to browsing by course, and contains 200 courses
- In some cases content a particular resource is only useful when one has the whole course material (for example, a test will refer to the open course text book for specific questions)
- All materials licensed under a Creative Commons Non-Commercial ShareAlike License



# B-IV(ii). OER Example 2 – MIT OCW

Icons provide indication as to what materials are included in each course

- > **Get Started with OCW**
- > VIEW ALL 2000 COURSES
- > Most Visited Courses
- > OCW Scholar
- > Editor's Picks
- > Audio/Video Courses
- > Translated Courses
- > New Courses

## > Find Courses

- ▣ Architecture and Planning
- ▣ Engineering
- ▣ Health Sciences and Technology
- ▣ Humanities, Arts, and Social Sciences
- ▣ Management
- ▣ Science
- ▣ Other Programs
- ▣ Cross-Disciplinary Courses
- ▣ Special Collections
- > Supplemental Resources
- > View All Departments

## > Highlights for High School

## > Other Resources

- > Archived Courses
- > MIT Curriculum Guide

Home > Courses














## Courses


- > Sign up for monthly updates on courses and news

 Notify me of course updates via RSS

## Courses by Department

- > Aeronautics and Astronautics
- > Anthropology
- > Architecture
- > Athletics, Physical Education and Recreation
- > Biological Engineering
- > Biology
- > Brain and Cognitive Sciences
- > Chemical Engineering
- > Chemistry
- > Civil and Environmental Engineering
- > Comparative Media Studies
- > Earth, Atmospheric, and Planetary Sciences
- > Economics
- > Electrical Engineering and Computer Science
- > Engineering Systems Division
- > Experimental Study Group
- > Foreign Languages and Literatures
- > Health Sciences and Technology
- > History
- > Linguistics and Philosophy
- > Literature
- > Materials Science and Engineering
- > Mathematics
- > Mechanical Engineering
- > Media Arts and Sciences
- > Music and Theater Arts
- > Nuclear Science and Engineering
- > Physics
- > Political Science
- > Science, Technology, and Society
- > Sloan School of Management
- > Special Programs
- > Supplemental Resources
- > Urban Studies and Planning
- > Women's and Gender Studies
- > Writing and Humanistic Studies

- |  |  |  |
|--|--|--|
|  Lecture notes              |  Projects and examples  |  Image Galleries    |
|  Selected lecture notes     |  Projects (no examples) |  Multimedia content |
|  Assignments and solutions  |  Exams and solutions    |  OCW Scholar        |
|  Assignments (no solutions) |  Exams (no solutions)   |  Study group        |
|  Online textbooks           |  |  |

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Ab Initio and OpenCourseWare:  
Built on fundamentals

**lenovo.**

MIT NOTICE

**OPEN**COURSEWARE  
CONSORTIUM

View thousands  
of OCW courses  
from leading

# B-IV(iii). OER Example 2 – MIT OCW

Download  
courses in  
their  
entirety

MIT OPENCOURSEWARE  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Home Courses Donate About OCW Help Contact Us Enter search keyword go Advanced Search

SIGN UP FOR OCW NEWS  
twitter facebook

Home > Courses > Physics > Physics II: Electricity & Magnetism with an Experimental Focus > Exams

## Exams

There will be four quizzes, each worth 15% of the grade. There will be no final exam.

QUIZ #	PRACTICE QUIZZES AND SOLUTIONS	QUIZZES AND SOLUTIONS
1	Review Practice Quiz 1a ( <a href="#">PDF</a> ) Practice Quiz 1b ( <a href="#">PDF</a> ) Solutions to 1a ( <a href="#">PDF</a> ) Solutions to 1b ( <a href="#">PDF</a> ) Corrections to 1a and 1b Solutions ( <a href="#">PDF</a> )	Quiz 1 ( <a href="#">PDF</a> ) Solutions ( <a href="#">PDF</a> )
2	Review ( <a href="#">PDF</a> ) Practice Quiz 2a ( <a href="#">PDF</a> ) Practice Quiz 2b ( <a href="#">PDF</a> ) Solutions to 2a and 2b ( <a href="#">PDF</a> ) (Note that the correct answer to 2A, problem 4A should be 300V/300V (or a little less due to internal resistance of the HVPS), not 150V/150V.)	Quiz 2 with Solutions ( <a href="#">PDF</a> )
3	Review ( <a href="#">PDF</a> ) Practice Quiz 3a ( <a href="#">PDF</a> ) Practice Quiz 3b ( <a href="#">PDF</a> ) Solutions to 3b ( <a href="#">PDF</a> )	Quiz 3 with Solutions ( <a href="#">PDF</a> )
4	Review ( <a href="#">PDF</a> ) Practice Quiz 4a ( <a href="#">PDF</a> ) Practice Quiz 4b ( <a href="#">PDF</a> ) Solutions to 4a ( <a href="#">PDF</a> ) Solutions to 4b ( <a href="#">PDF</a> )	Quiz 4 with Solutions ( <a href="#">PDF</a> )

Left sidebar links:

- > VIEW ALL COURSES
- > Course Home
- > Syllabus
- > Lecture Notes
- > Labs
- > Assignments
- > Exams
- > Download Course Materials
- > Send us your feedback
- > Cite this course
- > Email this page
- > Newsletter sign-up
- > Donate

# B-V. OER Example 3 – MERLOT

- Multimedia Educational Resources for Learning and Online Teaching (MERLOT) contains over 33,000 resources
- Some, but not all materials are peer reviewed
- MERLOT has very granular search options

The screenshot displays the MERLOT website homepage. At the top, the MERLOT logo is on the left, and a search bar with a dropdown menu set to 'materials' is on the right. Below the search bar are links for 'advanced search materials', 'advanced search members', and 'search other libraries'. A navigation menu includes 'Home', 'Communities', 'Learning Materials', 'Member Directory', 'My Profile', and 'About Us'. A banner for the 'Emerging Technologies 2012 Conference' is visible. The main content area is divided into several sections: 'Create Learning Materials with MERLOT Content Builder', 'Browse Collection' (listing Arts, Business, Education, Humanities, Mathematics and Statistics, Science and Technology, Social Sciences, and Workforce Development), 'News & Announcements' (featuring 'What's New in MERLOT' with statistics: 33,961 materials, 992 new materials, 102,663 members, and 1,003 new members), 'Welcome to MERLOT' (with a login form), 'Exploring MERLOT' (with links to Learning Materials, Personal Collections, Learning Exercises, Colleagues Across Disciplines, and Guest Experts), 'Visit a Discipline Community' (listing various fields like Agriculture, Criminal Justice, Information Technology, etc.), and 'Become a Member you can:' (listing benefits like contributing materials, creating a personal collection, etc.). At the bottom, there is a 'Translate this page' section with a language dropdown set to 'Spanish', a 'Microsoft Translator' link, and a footer with copyright information and a Creative Commons license.

# B-V(ii). OER Example 3 – MERLOT



Search  materials   
[advanced search materials](#) | [advanced search members](#) | [search other libraries](#)

- Home
- Communities
- Learning Materials
- Member Directory
- My Profile
- About Us

## Material Advanced Search

[Become a Member](#) | [Log In](#)

[Advanced Search Tips](#)

### Find material by attributes:

**Keywords:**  any words ☒ all words ☐ exact phrase ☐

**Title:**

**URL:**

**Description:**

**Community:** Any

**Subject Category:** Select a category...

**Language:** Any

**Material type:** Any

**Technical format:** Any

**Audience:** Any

### Find materials that work on different delivery platforms, including Learning Management Systems, Smart Phones, and Tablets:

Learning Management System:		Smart Phone:	Tablet:
<input type="checkbox"/> ANGEL Learning	<input type="checkbox"/> High Learn	<input type="checkbox"/> Android Phone	<input type="checkbox"/> Android Tablet
<input type="checkbox"/> Blackboard	<input type="checkbox"/> Moodle	<input type="checkbox"/> BlackBerry	<input type="checkbox"/> iPad
<input type="checkbox"/> Desire2Learn	<input type="checkbox"/> Sakai	<input type="checkbox"/> iPhone	<input type="checkbox"/> Samsung Galaxy Tab
<input type="checkbox"/> eCollege	<input type="checkbox"/> WebCT	<input type="checkbox"/> Windows Phone	Other: <input type="text"/>
<input type="checkbox"/> Epsilon	Other: <input type="text"/>	Other: <input type="text"/>	

### Find material by author:

### Find materials by Cost, Copyright, Creative Commons Licenses, Accessibility:

### Find Material by date added to MERLOT:

### Find materials with peer reviews, member comments, learning exercises, Content Builder, personal collections, and more:

Search options include material type, document format, materials for smartphones and tablets, licensing terms and peer review

# B-V(iii). OER Example 3 – MERLOT



Search  materials   
advanced search materials | advanced search members | search other libraries

Home

Communities

Learning Materials

Member Directory

My Profile

About Us

## Learning Materials

[Become a Member](#) | [Log In](#)

Browse Path: [All](#) > [Science and Technology](#) > [Physics](#) > [Quantum Mechanics](#)

[Contribute A Material](#)

### Physics

[Classical Mechanics \(340\)](#)  
[Electricity and Magnetism \(341\)](#)  
[General \(337\)](#)  
[Modern Physics \(307\)](#)  
[Optics \(213\)](#)  
[Oscillations and Waves \(232\)](#)  
[Quantum Mechanics \(109\)](#)  
[Thermodynamics and Statistical Mechanics \(148\)](#)

### Material Types

[Animation \(14\)](#)  
[Collection \(2\)](#)  
[Drill and Practice \(7\)](#)  
[Online Course \(14\)](#)  
[Open Journal-Article \(2\)](#)  
[Open Textbook \(4\)](#)  
[Presentation \(4\)](#)  
[Reference Material \(2\)](#)  
[Simulation \(53\)](#)  
[Tutorial \(7\)](#)

### Contribute a Material

Title:

URL:

[Next](#)

New Search:

Quantum Mechanics

Advanced Search

Items 1 - 10 shown of 109 results

Sort by: Overall Rating

#### Applets for quantum mechanics

Author: Manuel Joffre

This set of applets features illustrations of quantum mechanics through interactive animations in the...

Type: Simulation

Date Added: Mar 14, 1998

Date Modified: Mar 24, 2011



[Peer Review \(1\)](#)★★★★★

[Comments \(8\)](#)avg: ★★★★★

[Personal Collections \(18\)](#)

[Learning Exercises \(none\)](#)

[Accessibility Info \(none\)](#)

#### Math And Physics Applets

Author: Paul Falstad

This site provides a large selection of physics and math simulations. There is also fairly comprehensive...

Type: Simulation

Date Added: Dec 09, 2003

Date Modified: Mar 24, 2011



[Peer Review \(1\)](#)★★★★★

[Comments \(1\)](#)avg: ★★★★★

[Personal Collections \(9\)](#)

[Learning Exercises \(none\)](#)

[Accessibility Info \(none\)](#)

#### 1-D Quantum Mechanics Applet

Author: Paul Falstad

This quantum mechanics simulation shows the behavior of a single particle bound states in one dimension....

Type: Simulation

Date Added: Nov 18, 2004

Date Modified: Jul 09, 2009

[Peer Review \(1\)](#)★★★★★

[Comments \(none\)](#)

[Personal Collections \(none\)](#)

[Learning Exercises \(none\)](#)

[Accessibility Info \(none\)](#)

#### 1-D Quantum Transitions Applet

Author: Paul Falstad

This quantum mechanics simulation shows the interaction of classical electromagnetic radiation with a...

Type: Simulation

Date Added: Nov 18, 2004

Date Modified: Jul 09, 2009

[Peer Review \(1\)](#)★★★★★

[Comments \(none\)](#)

[Personal Collections \(none\)](#)

[Learning Exercises \(none\)](#)

[Accessibility Info \(none\)](#)

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# B-V(iv). OER Example 3 – MERLOT



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**Submitter:** [Lisa Lewin](#)

### Description:

Using only dialogue spoken by characters in (copyrighted) Walt Disney films, this humorous video briefly reviews the laws covering copyright and fair use and bemoans the lengthening of the copyright period in the U.S.

### Keywords:

communications ethics, arts, communications, media and culture studies, sciences, collage, humor, mashup, disney

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**Language:** English

**Cost Involved:** no

**Source Code Available:** no

**Accessibility Information Available:** unsure

**Copyright:** no



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# C-I. OER, Copyright and Licensing

- Copyright is a barrier to both OER use and creation
- Licensing is essential to making a resource open:
  - Copyright inhibits both use (copying, modifying, and publishing materials) and creation (preventing others from copying, modifying and publishing)
- In the case of creation there are added concerns, as third party material included within an OER must be checked and possibly cleared with the rights holder
  - Checking copyright/licensing terms and locating the rights holders/clearing rights can be more time consuming than creating the OER

# C-II. Copyright

- Copyright automatically subsists in original creative works (including software) – no © symbol or “Copyright, John Doe 2012” is required
- Exclusive rights of the copyright owner (Copyright Act s. 3):
  - Copy, publish or perform the work or a substantial part of it
  - Translate a work or convert a work into another format
  - Communicate a work by means of telecommunication
  - Authorize any of the above acts
- While there are exceptions (fair dealing (Can.)/ fair use (U.S.)), they are limited, as are specific exceptions for educational institutions/educators
- Eventually copyright expires – but only after a long time
  - Copyright term in Canada is the life of the author + 50 years

# C-III. The Public Domain

- Public domain describes intellectual material which is not covered by intellectual property rights and includes:
  - Materials where the term of protection has expired
  - Materials never protected (e.g. non copyrightable material)
  - Materials where copyright has been forfeited
- Examples include:
  - Works of Dickens and Tolstoy (copyright expired)
  - Facts and ideas (not copyrightable)
  - U.S. government materials (not covered by copyright)
- Although there are no restrictions on using public domain materials, as an author/creator if you surrender your work to the public domain you have no control over it

# C-IV. Licensing and Creative Commons

- Licensing systems, such as [Creative Commons](#), offer a way of mediating between the restrictions of copyright and lack of control of the public domain
- Creative Commons is the overwhelmingly most common licensing scheme, but others exist (such as the [GNU Free Documentation License](#))
- Creative Commons licenses operate on three layers:
  - Legal code – the legal, “fine print” version of the license
  - Digital code – a machine readable copy of the license attached to the document’s metadata
  - Human code – the plain language summary of the license including relevant icons to indicate license terms

# C-V. The Creative Commons Licenses

- All Creative Commons licenses provide several common features:
  - They are irrevocable, worldwide, last the duration of the copyright term and in no way circumscribe fair dealing/use rights
  - Users are given the rights to copy, distribute, display, digitally perform and change the format of a work
  - Every copy of the work should maintain a link to the license, and all copyright notices within a work should not be removed
  - Attribution must always be given to the author (**BY**)
- Creators can chose additional options based on their preferences:
  - Non-Commercial (**NC**) – materials should not be used for commercial purposes
  - No Derivatives (**ND**) – others cannot make derivative works based on the original
  - Share Alike (**SA**) – others may make derivatives works, but such works must contain identical licensing terms as the original
- The ND and SA options are incompatible

# C-V(ii). The Creative Commons Licenses

- **Attribution (CC BY)** – any type of reuse (derivatives) allowed so long as the original source is credited



- **Attribution, Share Alike (CC BY-SA)** – any type of reuse allowed so long as the original source is credited, and the resulting content has the same licensing terms



- **Attribution, No Derivatives (CC BY-ND)** – allows for redistribution (both commercial and non-commercial), but content must remain whole and original source credited



- **Attribution, Non-Commercial (CC BY-NC)** – allows for redistribution and derivatives, but cannot be commercial in nature and original source must be credited



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- **Attribution, Non-Commercial, No Derivatives (CC BY-NC-ND)** – allows for only non-commercial redistribution of the original and source must be credited



# D-I. Creating OER

- Even though extensive OER exist, there are still gaps to be filled
- Start small – take a guest lecture or syllabus and publish it
- OER are best developed collaboratively
- Ask for feedback from both peers and students
- Seek institutional support for both space to publish materials and recognition for OER work
- Be mindful of copyright and other intellectual property rules as well as privacy policies and legislation



# D-II. Creation Considerations

- As an OER creator you have two means to control how open the resources is:
  - The licensing terms, and
  - The format of the file(s)
- Surrender to the public domain, a CC Attribution (CC BY) license, and a CC Attribution, Share-Alike (CC BY-SA) licenses grant other users the greatest amount of freedom
- Editable file formats (such as HTML, RTF and PNG) allow for much easier modification, while formats such as PDF fetter alteration
- Logically, if the license allows modification of the OER, it makes sense to disseminate the file in an editable format

# D-II(ii). Creation Considerations

- Consideration should also be given to proprietary file formats – many users may not be able to use the most current versions of major commercial software
- Hyperlinks are most useful when they are both linked and have the URL provided as potential users may print materials rather than use them in electronic form
- Large fonts, captions for audio materials and clear contrasts between colours make works more accessible
- Localized or obscure cultural references, slang and neologisms can impede learning by users who are not familiar with the author's language and culture

# D-III. Disseminating OER

- Four major ways to disseminate one's resources:
  - Institutional repository (e.g. [Scholarship@Western](#))
  - Open Repository (e.g. [OER Commons](#))
  - Online OER Generation Site (e.g. [Connexions](#))
  - Social Networking and Web 2.0 sites (e.g. YouTube and Flickr)
  - Use an
- Creative Commons has specific webpages for both [how to mark one's own work with a license](#), and [how to properly attribute other's CC work](#)
- [Microsoft offers an add-in](#) that allows for easy marking of Word, Excel and PowerPoint documents with a CC license

# References and Additional Resources

- OER Publications
  - OECD. 2007. *Giving Knowledge for Free* . Paris, OECD:  
<http://www.oecd.org/dataoecd/35/7/38654317.pdf>
  - UNESCO/Commonwealth of Learning (COL). 2011. *Guidelines for Open Educational Resources (OER) in Higher Learning*: [http://www.col.org/PublicationDocuments/Guidelines\\_OER\\_HE.pdf](http://www.col.org/PublicationDocuments/Guidelines_OER_HE.pdf)
  - UNESCO/COL. 2011. *Basic Guide to Open Educational Resources (OER)*:  
<http://www.col.org/PublicationDocuments/Basic-Guide-To-OER.pdf>
  - Iiyoshi T. & Kumar M. S. V. 2008. *Opening Up Education*. Cambridge, MA: MIT Press:  
<http://mitpress.mit.edu/books/chapters/0262033712pref1.pdf>
- General OER Websites:
  - UNESCO OER Portal: <http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/open-educational-resources/>
  - OECD OER Portal:  
[http://www.oecd.org/document/20/0,3746,en\\_2649\\_35845581\\_35023444\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/20/0,3746,en_2649_35845581_35023444_1_1_1_1,00.html)
  - Commonwealth of Learning (COL) OER Site:  
<http://www.col.org/resources/crsMaterials/Pages/OCW-OER.aspx>
  - Open Education Week Website: <http://www.openeducationweek.org/>
  - Creative Commons Education Portal: <http://creativecommons.org/education>
  - William and Flora Hewlett Foundation OER Site:  
<http://www.hewlett.org/programs/education-program/open-educational-resources>

# References and Additional Resources

- OER Search Engines:
  - Open CourseWare Finder: <http://opencontent.org/ocwfinder/>
  - Global Learning Objects Brokered Exchange (GLOBE) Alliance: <http://www.globe-info.org/>
  - Folksemantic: <http://www.folksemantic.com/>
- OER Directories and Repositories:
  - Consortium for Educational Communication Learning Objects Repository: <http://www.cec-ugc.org/lor/Default.aspx>
  - OER Africa: <http://www.oerafrica.org/>
- Institutional Sites:
  - The Open University's Learning Space: <http://openlearn.open.ac.uk/>
  - Utah State University Open CourseWare: <http://ocw.usu.edu/>
  - University of Notre Dame Open CourseWare: <http://ocw.nd.edu/>
  - University of California, Irvine Open CourseWare: <http://ocw.uci.edu/SpecialIndex.aspx>
  - Open Yale Courses: <http://oyc.yale.edu/>
  - African Virtual University: <http://www.avu.org/>
- Information on Accreditation in Higher Education
  - Accredited Online Schools and Colleges: <http://www.accreditedonlinecolleges.org/Guide/>

# Copyright and License Notes and Feedback

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- Feedback
  - The author (Michael B. McNally) welcomes any and all feedback by email – [mmcnall2@uwo.ca](mailto:mmcnall2@uwo.ca)